# BAKERS HAULOVER INLET MANAGEMENT STUDY IMPLEMENTATION PLAN CERTIFICATE OF ADOPTION

WHEREAS the Department of Environmental Protection, in partnership with the Dade County, has conducted a study of Bakers Haulover, under the provisions of Section 161.161, Florida Statutes, for the purposes of evaluating the erosive impact of the inlet on adjacent beaches, and

WHEREAS the Department has developed an implementation plan which contains corrective measures to mitigate the identified impacts of the inlet, and

WHEREAS the implementation plan is consistent with the Department's program objectives under Chapter 161, Florida Statutes,

The Department does hereby adopt the following implementation actions:

- 1) Placement of all beach compatible maintenance dredged material on downdrift beaches in areas of greatest need based on the comprehensive monitoring program or on updrift beaches if justified by monitoring data.
- 2) Implement a comprehensive inlet, beach, and offshore monitoring program in conjunction with the existing federal beach restoration project.

This plan is based on the supporting data contained in the study report, <u>Bakers Haulover Inlet Management Plan, Coastal Planning & Engineering, Inc., March 1995</u> and studies conducted by the U.S. Army Corps of Engineers. Each implementation action contained in this plan is subject to further evaluation, and subsequent authorization. Any action that may affect navigation associated with the inlet shall be consistent with all applicable federal requirements and subject to authorization from the U.S. Army Corps of Engineers.

It is the intent of the Department to assist in the implementation of the plan through the provision

of funds granted under the Florida Beach Erosion Control Program. The Department's financial obligations shall be contingent upon sufficient legislative appropriations.

Nothing in this plan precludes the evaluation and potential adoption of other alternatives or strategies for management at Bakers Haulover Inlet.

APPROVED FOR ADOPTION

Virginia B. Wetherell, Secretary

Department of Environmental Protection

9.5.97

Date

# BAKERS HAULOVER INLETMANAGEMENT STUDY SUMMARY OF FINDINGS REPORT and RECOMMENDED IMPLEMENTATION PLAN

#### <u>Introduction</u>

The Department of Environmental Protection, in partnership with Dade County, completed an inlet management study of Bakers Haulover Inlet. The study, <u>Bakers Haulover Inlet Management Plan, Coastal Planning & Engineering, Inc., March 1995</u> was conducted under the provisions of Section 161.161, Florida Statutes, for the purpose of evaluating the erosive impact of the inlet on adjacent beaches, and to recommend corrective measures to mitigate identified impacts.

The study has been evaluated by the staff of the Bureau of Beaches and Coastal Systems as it relates to the Bureau's statutory responsibilities and program objectives. As a result of that evaluation, the Bureau has developed a recommended implementation plan. Adoption of the plan will facilitate and streamline the coastal construction permitting process during its implementation by providing a basis for consistency determination, and enable governmentalentities to seek financial assistance from the Department to conduct management activities authorized in the plan.

This report contains a brief history of Bakers Haulover\_Inlet a summary of the Inlet study findings, and a consistency determination. The report also contains the recommended implementation plan.

## **History of Bakers Haulover Inlet**

Bakers Haulover Inlet is a man-made inlet created in 1925 connecting Biscayne Bay and the Atlantic Ocean (Figure 1). In 1926 a hurricane destroyed the bulkhead and jetty on the ocean side of the inlet.

In 1927 two 700 foot long steel sheet pile jetties were constructed 325 feet apart on the north and south sides. Also five steel sheet pile groins were constructed south of the inlet 100 feet apart. In 1963 the north jetty and revetment were reconstructed with granite rubble and in 1986 the jetty was tightened and an angled spur was added to the end In 1964 the south jetty and revetment was relocated and reconstructed with granite rubble and in 1974 a recurved section was added. The north jetty is 250 feet long and the south jetty is 735 feet long. The inlet entrance channel is 400 feet wide and 14 feet deep.

The inlet modifications have caused the interruption of longshore sand transport along the adjacent shorelines. The area of influence of the

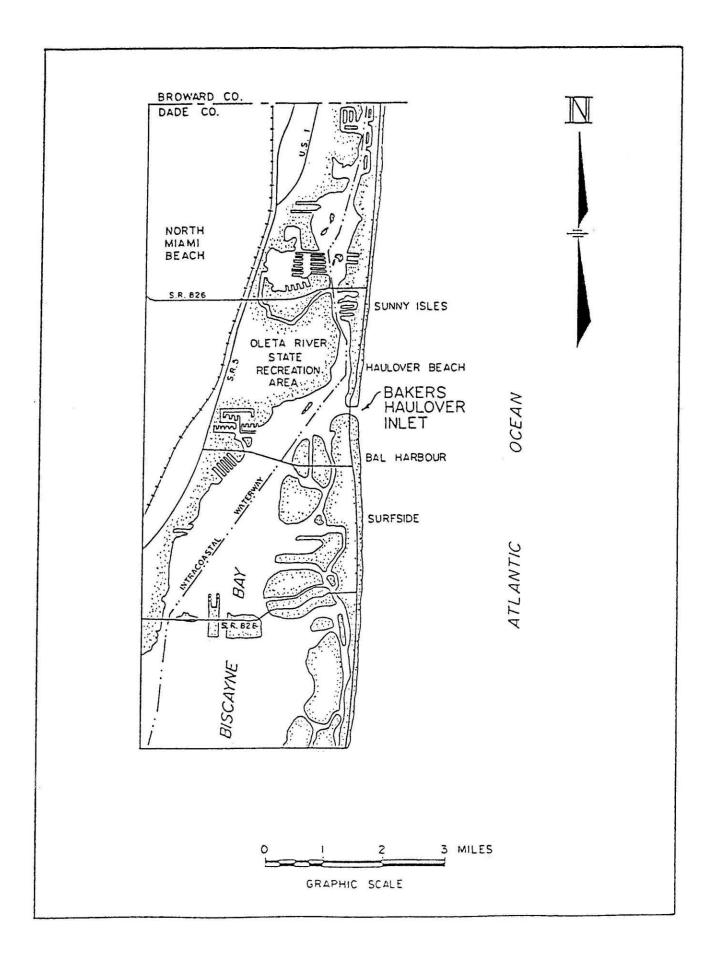


Figure 1

inlet in its current configuration is 2,500 feet to the north and 2,000 feet to the south. A sediment budget, developed as part of the study, estimates the need to bypass 26,700 cubic yards annually to offset the impacts of the inlet (Figure 2). The sediment budget is based primarily on the evaluation of data from 1980 to 1986.

#### **Study Summary**

To accomplish the plan objectives, the study evaluated numerous potential management activities in terms of environmental impacts, permitting constraints, fiscal concerns, and potential achievability. The study recommends three principle elements involving sand bypassing facilitate and streamline the coastal construction permitting process during its implementation by providing a basis for consistency determination, and enable governmentalentities to seek financial and inlet improvements:

- 1) Maintenance dredge the inlet navigation channel and place material on downdrift beaches.
- 2) Continue the Dade County Beach Erosion and Hurricane Protection Project. This project involves placing sand north of the inlet at Haulover Beach Park and south of the inlet from Bal Harbor to Government Cut (Figure 3).
- 3) Continue the existing monitoring program.

#### **Consistency Determination and Comments**

Each of the three primary recommendations has been evaluated for consistency with program objectives under Chapter 161, Florida Statutes. The consistency determination is based solely upon the recommendation as presented in the study report. A determination does not preclude further study of other potential management alternatives. Comments regarding each recommendation are as follows:

- Continued maintenance dredging with beach disposal is consistent, but should include optimization of dredging cycles to facilitate sand bypassing. Management efforts should be undertaken with the State, the Corps of Engineers, and the local sponsor to ensure that maintenance dredging material is placed onto downdrift beaches in an optimal manner. There should also be an allowance for disposal sites to be located in areas of greatest need based on results from long term monitoring and be subject to Department approval.
- 2) Periodic nourishment of the downdrift shoreline from offshore borrow sites is consistent, but subsequent nourishment of the beach nourishment for the purposes of Chapter 161.101 F.S.
- Implementation of a comprehensive beach and offshore monitoring program is consistent, provided that the monitored areas are located within the influence of the inlet and sufficient control areas are established outside of the influence of the inlet. The inlet monitoring program shall be coordinated with and incorporated as part of a comprehensive county-wide monitoring program.

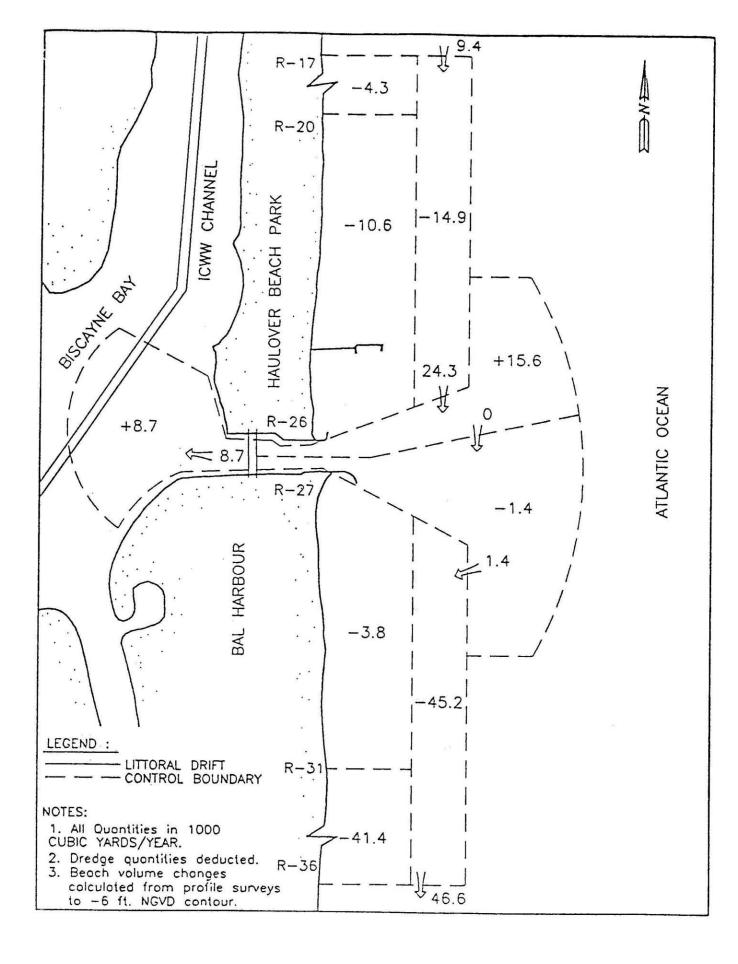


Figure 2

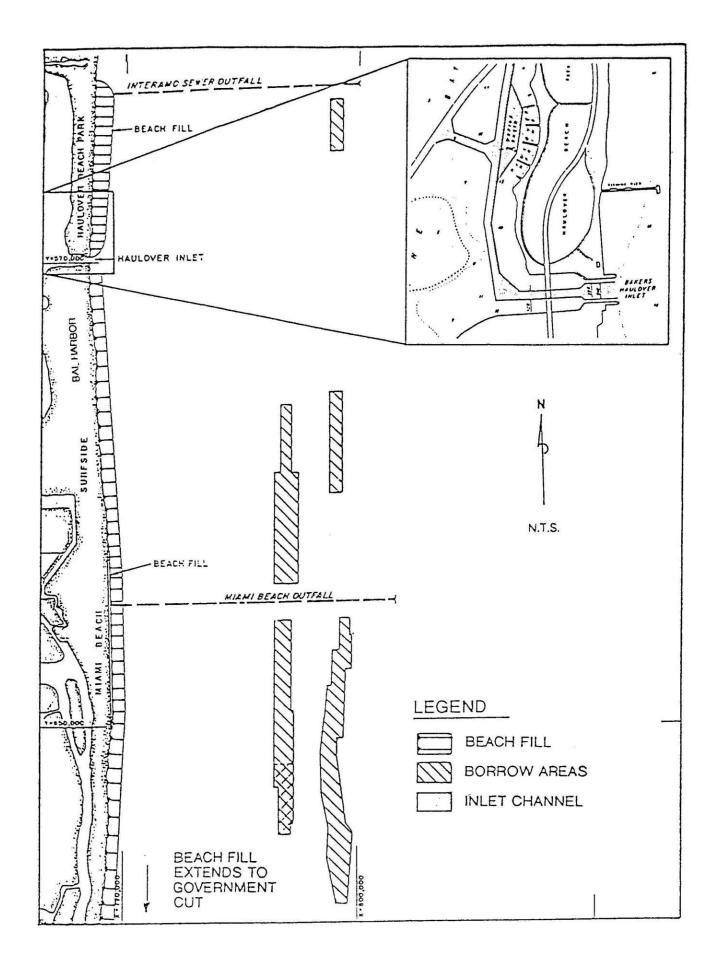


Figure 3

### Recommended Implementation Plan

The Bureau recommends the following implementation plan be adopted to meet the requirements of Chapter 161, Florida Statutes:

- 1) Placement of all beach compatible maintenance dredged material on downdrift beaches in areas of greatest need based on the comprehensive monitoring program or on updrift beaches if justified by monitoring data.
- 2) Implement a comprehensive inlet, beach, and offshore monitoring program in conjunction with the existing federal beach restoration project.

This plan is based on the supporting data contained in the study report, Bakers Haulover Inlet Management Plan, Coastal Planning & Engineering, Inc., March 1995 studies conducted by the U.S. Army Corps of Engineers, and comments provided by public agencies and the citizenry of Dade County. Each implementation action contained in this plan is subject to further evaluation, and subsequent authorization or denial, as part of the Department's environmental permitting and authorization process. Any action that may affect navigation associated with the inlet shall be consistent with all applicable federal requirements and subject to authorization from the U. S. Army Corps of Engineers.

The implementation activities identified above shall be eligible for state financial participation subject to Department approval and an appropriation from the Florida Legislature. The level of state funding shall be determined based upon the activity being conducted and Department policy. The Department may choose not to participate financially if the proposed method for implementation is not cost effective or fails to meet the intent of Section 161.142, Florida Statutes.

Nothing in this plan precludes the evaluation and potential adoption of other alternatives or strategies for management at Bakers Haulover Inlet.